

In the Claims

Claims 1 - 24 (Cancelled)

25. (New) A highly corrosion resistant high strength stainless steel pipe for linepipe having a composition comprising: about 0.001 to about 0.015% C, about 0.01 to about 0.5% Si, about 0.1 to about 1.8% Mn, about 0.03% or less P, about 0.005% or less S, about 15 to about 18% Cr, about 0.5% or more and less than about 5.5% Ni, about 0.5 to about 3.5% Mo, about 0.02 to about 0.2% V, about 0.001 to about 0.015% N, and about 0.006% or less O, by mass, to satisfy the formulae (1), (2), and (3), and balance of Fe and impurities:

$$\text{Cr} + 0.65\text{Ni} + 0.6\text{Mo} + 0.55\text{Cu} - 20\text{C} \geq 18.5 \quad (1)$$

$$\text{Cr} + \text{Mo} + 0.3\text{Si} - 43.5\text{C} - 0.4\text{Mn} - \text{Ni} - 0.3\text{Cu} - 9\text{N} \geq 11.5 \quad (2)$$

$$\text{C} + \text{N} \leq 0.025 \quad (3)$$

where C, Ni, Mo, Cr, Si, Mn, Cu, and N signify the content of the respective elements.

26. (New) The high strength stainless steel pipe according to claim 25, further comprising about 0.002 to about 0.05% Al by mass.

27. (New) The high strength stainless steel pipe according to claim 25, wherein the content of Ni is about 1.5 to about 5.0% by mass.

28. (New) The high strength stainless steel pipe according to claim 25, wherein the content of Mo is about 1.0 to about 3.5% by mass.

29. (New) The high strength stainless steel pipe according to claim 25, wherein the content of Mo is more than about 2% and not more than about 3.5% by mass.

30. (New) The high strength stainless steel pipe according to claim 25, further comprising about 3.5% or less Cu by mass.

31. (New) The high strength stainless steel pipe according to claim 30, wherein the content of Cu is about 0.5 to about 1.14% by mass.

32. (New) The high strength stainless steel pipe according to claim 25, further comprising at least one element selected from the group consisting of about 0.2% or less Nb, about 0.3% or less Ti, about 0.2% or less Zr, about 0.01% or less B, and about 3.0% or less W, by mass.

33. (New) The high strength stainless steel pipe according to claim 25, further comprising 0.01% or less Ca by mass.

34. (New) The high strength stainless steel pipe according to claim 25, further comprising a microstructure comprising about 40% or less residual austenite phase and about 10 to about 60% ferrite phase, by volume, with martensite phase as a base phase.

35. (New) The high strength stainless steel pipe according to claim 34, wherein the ferrite phase is about 15 to about 50% by volume.

36. (New) The high strength stainless steel pipe according to claim 34, wherein the residual austenite phase is about 30% or less by volume.

37. (New) A method for manufacturing highly corrosion resistant high strength stainless steel pipe for linepipe comprising:

forming a steel pipe having a selected size from a steel pipe base material having a composition comprising about 0.001 to about 0.015% C, about 0.01 to about 0.5% Si, about 0.1 to about 1.8% Mn, about 0.03% or less P, about 0.005% or less S, about 15 to about 18% Cr, about 0.5% or more and less than about 5.5% Ni, about 0.5 to about 3.5% Mo, about 0.02 to about 0.2% V, about

0.001 to about 0.015% N, and about 0.006% or less O, by mass, to satisfy the formulae (1), (2), and (3), and balance of Fe and impurities;

reheating the steel pipe to about 850°C or higher temperature;

cooling the heated steel pipe to about 100°C or lower temperature at a cooling rate of at or higher than air-cooling rate; and

applying quenching and tempering treatment to the cooled steel pipe, to heat thereof to about 700°C or lower temperature:

$$\text{Cr} + 0.65\text{Ni} + 0.6\text{Mo} + 0.55\text{Cu} - 20\text{C} \geq 18.5 \quad (1)$$

$$\text{Cr} + \text{Mo} + 0.3\text{Si} - 43.5\text{C} - 0.4\text{Mn} - \text{Ni} - 0.3\text{Cu} - 9\text{N} \geq 11.5 \quad (2)$$

$$\text{C} + \text{N} \leq 0.025 \quad (3)$$

where Cr, Ni, Mo, Cu, C, Si, Mn, and N signify the content of the respective elements.

38. (New) The method according to claim 37, comprising:

heating the steel pipe base material;

forming the steel pipe from the steel pipe base material by hot-working;

cooling the steel pipe to room temperature at a cooling rate of at or higher than air-cooling rate to thereby obtain a seamless steel pipe having a selected size; and

applying the quenching and tempering treatment to the seamless steel pipe.

39. (New) The method according to claim 37, comprising: applying tempering treatment to heat the seamless steel pipe to 700°C or lower temperature instead of the step of quenching and tempering treatment.

40. (New) The method according to claim 37, wherein the steel pipe base material further comprises about 0.002 to about 0.05% Al by mass.

41. (New) The method according to claim 37, wherein the content of Ni is about 1.5 to about 5.0% by mass.

42. (New) The method according to claim 37, wherein the content of Mo is about 1.0 to about 3.5% by mass.

43. (New) The method according to claim 37, wherein the content of Mo is more than about 2% and not more than about 3.5% by mass.

44. (New) The method according to claim 37, further comprising about 3.5% or less Cu by mass.

45. (New) The method according to claim 44, wherein the content of Cu is about 0.5 to about 1.14% by mass.

46. (New) The method according to claim 37, further comprising at least one element selected from the group consisting of about 0.2% or less Nb, about 0.3% or less Ti, about 0.2% or less Zr, about 3.0% or less W, and about 0.01% or less B, by mass.

47. (New) The method according to claim 37, further comprising about 0.01% or less Ca by mass.

48. (New) A welded structure fabricated by welding to join together the high strength stainless steel pipes according to claim 25.